

A Few New Children:

Postinstitutionalized Children of Intercountry Adoption

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Research regarding children of intercountry adoption is limited, and most children of intercountry adoption have complex histories that may place them at risk for difficulty or failure in the classroom. Although the performances of some children from orphanage environments approximate those of chronological-age peers 2 to 4 years postadoption, duration of deprivation is consistently related, both historically and currently, to the cognitive delays and behavioral difficulties displayed by many postinstitutionalized children. Research regarding children of intercountry adoption is reviewed, and recommendations for future research are offered.

Intercountry adoption, also called international adoption, refers to the adoption of foreign-born children by citizens of the United States. In the decade from 1993 to 2002, 137,272 children of intercountry adoption entered the United States with their new parents (U.S. Department of State, 2003). Approximately 90% of these youngsters were adopted from China, Russia, South Korea, Guatemala, Romania, and Vietnam or former Soviet states such as the Ukraine, Kazakhstan, and Belarus, with Russia and China alone accounting for more than 60% of all international adoptions by U.S. citizens from 1998 to 2002.

With the exception of South Korea, Guatemala, and parts of Romania, most of these countries use an orphanage system to provide care for their abandoned children. Thus, more than 80% of children currently adopted internationally, particularly those from China, Russia, and other eastern European countries, have spent one or more years in institutionalized care (Groze & Ileana, 1996; Meese, 2002). The quality of institutionalized care varies, of course, among different countries and even among orphanages within a particular country. Nevertheless, characteristics associated with orphanage life, including poor health care, inadequate nutrition, exposure to environmental toxins and infectious diseases, limited opportunities for language and cognitive stimulation, rotating shifts of caregivers who have little or no training, and regimented requirements for daily living, may delay or preclude normal development (Johnson & Dole, 1999). In addition, children are most often placed in such institutions abroad as a result of their birth history or because they come from single-parent, impoverished, or politically chaotic environments. According to Johnson (2000), "over 50% of institutionalized children in Eastern Europe are low birth weight infants, many were born prematurely,

and some have been exposed to alcohol in utero [and] children with major medical problems or physical handicaps may be placed in orphanages by their [biological] parents due to limited access to corrective treatment and rehabilitation services" (p. 6).

Postinstitutionalized children of intercountry adoption, therefore, constitute a high-risk group; such adoptions are considered "special needs" adoptions (Johnson & Dole, 1999). These children may demonstrate complex behavioral, medical, and language difficulties (Gindis, 1997; Groze & Ileana, 1996; Johnson et al., 1992); yet their needs are not well understood and their backgrounds are often unknown. Furthermore, the research that exists regarding these children is primarily limited to a select few within the medical community who practice at international adoption clinics, to parent support groups (e.g., Families of Russian and Ukrainian Adoption, Families with Children from China, Parent Network for the Post-Institutionalized Child), and to research teams in Canada (Chisholm, 1998; Morison, Ames, & Chisholm, 1995; Morison & Ellwood, 2000) and Great Britain (Groothues, Beckett, & O'Connor, 2001; O'Connor, & Rutter, 2000; O'Connor et al., 2000; Rutter & the English and Romanian Adoptees [ERA] Study Team, 1998; Rutter, Kreppner, & O'Connor, 2001). Much like parents of children with disabilities in the years before federal legislation mandated special education services, parents of postinstitutionalized children of intercountry adoption are often more "tuned in" to the special needs of their children than are professionals in the schools. Consequently, when they approach their school for help, they are frustrated that school professionals do not know how to test or teach their children. Parents often receive conflicting opinions and encounter systems barriers to special services for their children.

Of particular concern are factors associated with prior institutionalization that place children at risk for learning and behavioral difficulties in school. Moreover, prior institutionalization combined with a shift in first language makes early assessment for special education intervention essential but difficult. The purpose of this article, then, is to review what is currently known regarding the growth and development of postinstitutionalized children following intercountry adoption, to discuss the effect of a first-language shift on their learning, and to present recommendations for future research to begin to understand and address the complex needs of many of these youngsters.

Literature Review Results

To conduct the research for this article, electronic databases (i.e., ERIC, MEDLINE, PsycInfo, and PubMed) were searched using terms such as *inter-country adoption*, *Romanian orphans*, *Russian orphans*, *Chinese orphans*, *post-institutionalized children*, and *internationally adopted children* to locate empirical studies reported in peer-reviewed journals. Online journals from organizations designating electronic versions as official peer-reviewed publications were also accepted (e.g., *Pediatrics* as an official online peer-reviewed publication of the American Academy of Pediatrics). Databases were surveyed from 1990, when the first wave of Romanian adoptions began, to the present. A total of 21 empirical studies were located from peer-reviewed journals. Table 1 provides a summary of the research-based articles reviewed.

Due to the limited number of empirical studies regarding these children found in peer-reviewed journals, parent organizations, along with their respective Web sites regarding postinstitutionalized children, were also searched (e.g., www.frua.org, www.fwcc.org, www.pnpic.org). Articles from these sources, literature reviews from peer-reviewed journals, and papers from conferences held by parent groups (e.g., FRUA Conference on Educational Issues for International Adoptees) or professional organizations (e.g., International Society for the Study of Behavioural Development; Society for Research in Child Development) were included but treated separately for analysis to provide a broader background and richer context.

Growth and Development of Postinstitutionalized Children

Long before the current interest in intercountry adoption, early research consistently suggested the adverse impact of institutionalization on the development of children. For example, studies of children raised in orphanages in the United States until the mid-20th century indicated that these youngsters experienced lasting delays in language and physical development (Provence & Lipton, 1962). They also suffered long-term difficulty in forming healthy emotional attachments and relationships with others (Goldfarb, 1945) and dis-

played continuing delays in cognitive development even after adoption (Goldfarb, 1943; Provence & Lipton, 1962). Moreover, studies of children adopted from Korea in the late 1950s and early 1960s suggested that as adolescents, children who were older at the time of their adoption lagged behind those adopted during infancy in both self-esteem and academic achievement (Kim, 1977). Although such early studies have been criticized for methodological reasons (Morison & Ellwood, 2000), similar delays have more recently been observed in postinstitutionalized children adopted from orphanages since 1990.

At the time of their adoption, children reared in institutions abroad frequently evidence delays or deficits in language and cognitive, behavioral, and motor skills (Glennen, 2002; Johnson & Dole, 1999; Miller & Hendrie, 2000). In addition, they may have difficulty processing and integrating sensory information (Cermak & Daunhauer, 1997), problems developing healthy attachment behaviors (Chisholm, 1998; O'Connor & Rutter, 2000; Zeanah, 2000), elevated stress hormone levels with associated poor growth and behaviors related to posttraumatic stress disorder (Gunnar, Morison, Chisholm, & Schuder, 2001), and other unusual patterns of behavior (e.g., hoarding food, rocking, aggression, withdrawal, "quasi-autism" or "institutional autism") (Federici, 1998; Johnson, 2001; Rojewski, Shapiro, & Shapiro, 2000). Furthermore, these difficulties hold remarkably constant despite the country of origin (Meese, 2002). Although we do not yet know how children of intercountry adoption will fare over the long term, like their counterparts adopted earlier from institutions in the United States, these children may not escape institutionalization completely unscathed (Johnson & Dole, 1999).

Review of Empirical Studies From Peer-Reviewed Journals

Fifteen of the 21 empirical studies available from peer-reviewed journals focused on children adopted from Romania, with 13 of these reporting data from just two samples of children living in Canada and the United Kingdom. Four additional studies reported data regarding children from other eastern European countries, such as Russia, and two examined children adopted from China.

Children From Romania. Johnson et al. (1992) examined 65 children referred to an international adoption clinic. The children ranged in age from 6 weeks to 73 months at the time of their adoption from Romania, with approximately two thirds having spent their entire lives in institutional care. Johnson et al. noted that these children lost approximately 1 month of linear growth for every 3 months they spent in the orphanage. Moreover, no more than 15% of the children were judged to be developmentally normal and physically healthy at the time of adoption, with 50% having intestinal parasites or evidence of hepatitis B infection, for example.

Groze and Ileana (1996) surveyed the adoptive parents of 462 children adopted from Romania. Approximately 95% of the children were under the age of 5 at the time of their adoption, and all had lived in the United States for fewer than 4 years. Parents reported that 60% of the children were below normal weight and 49% were below normal height upon adoption. It is interesting that 75% of the children were of school age at the time of the survey, with approximately 25% ($n = 81$) receiving some form of special education services through their school. Language problems, delayed motor skills, delayed social skills, and chronic medical problems were among the concerns noted by parents. Groze and Ileana reported that delays in height, weight, fine and gross motor skills, and social and language skills were related to the length of time spent in the institution.

Parents in the United Kingdom reported similar patterns of developmental delays among their children adopted from Romania. Rutter and the ERA Study Team (1998), for example, compared a sample of 111 Romanian children adopted in Great Britain before age 2 with a sample of 52 children from the United Kingdom who were adopted by the age of 6 months. All of the Romanian adoptees had spent their lives from birth onward in conditions of gross deprivation. Those Romanian children adopted by age 6 months were able to "catch up" to their peers in physical growth and cognitive development by age 4; however, children adopted after age 6 months experienced a different pattern. Although those children improved in their growth and development, they still exhibited delays at age 4 when compared to their chronological-age peers.

In further analyses of the data for this sample of children, O'Connor, Marvin, Rutter, Olrick, Britner, and other members of the ERA Study Team (2003) examined attachment behavior at age 4 years. Those children who experienced early and severe deprivation evidenced atypical patterns of attachment behavior (e.g., indiscriminate approach and positive affect toward strangers) and were less securely attached to caregivers when compared with their counterparts adopted within the United Kingdom. In addition, duration of deprivation was strongly associated with attachment disturbances, with the late-placed Romanian children evidencing more insecure attachment behaviors than the earlier-placed Romanian children.

In a follow-up study (O'Connor, Rutter, Beckett, Keaveney, Kreppner, & the ERA Study Team, 2000), the 111 Romanian children in the original longitudinal sample and the 52 children adopted within the United Kingdom were compared with 48 additional children adopted from Romanian institutions between the ages of 24 and 42 months. All of these "late-placed" Romanian children had experienced severe privation from birth onward. Although the children in the original longitudinal sample experienced significant gains overall, their recovery at age 6 was not complete, and in some cases early deficits were maintained. Not surprisingly, the late-placed Romanian children evidenced lower cognitive scores and greater developmental impairment when compared with

those children adopted at an earlier age. Of critical interest, however, was the finding that early deprivation continued to exert an influence on later adjustment, with duration of privation a more important predictor of individual outcomes than time spent in the adoptive home beyond 2 years.

In additional analyses of the data obtained from this sample, Rutter, Kreppner, and O'Connor (2001) found that one fifth of the Romanian children who had spent the longest time in orphanages demonstrated normal functioning at age 6 years. In addition, emotional difficulties, poor peer relationships, and conduct problems were not related to institutional privation. Attachment problems, inattention and overactivity, quasi-autistic behaviors, and cognitive impairment, however, were more common in the Romanian sample, with a significant association between those problems and age of entry into the United Kingdom (i.e., duration of stay in the institutional environment). As a matter of fact, Kreppner, O'Connor, Rutter, and members of the ERA Study Team (2001) suggested that inattention and overactivity may indeed be a specific deprivation syndrome. That is, inattention and overactivity were associated with duration of deprivation but not with low birthweight, malnutrition, or cognitive impairment for this sample of children. Moreover, the effects of duration of deprivation on inattention and overactivity did not lessen with time in the adoptive home.

Similarly, O'Connor and Rutter (2000) found a relationship between duration of deprivation and attachment disturbances, although 70% of their sample of Romanian children evidenced no attachment difficulty despite severe deprivation lasting more than 2 years. O'Connor and Rutter suggested that although early deprivation may have long-term effects on attachment, grossly poor care is not a sufficient condition for attachment disorders to develop.

It is interesting to note that parental satisfaction with the adoption of their children from Romania remained high as these children reached age 6 years (Groothues et al. 2001). Child behavior problems, difficulty at school, and an older age at adoption—and therefore increased levels of attachment disturbances or hyperactivity—were related to less parental satisfaction with the adoption. Surprisingly, however, such problems were not necessarily related to parental negativity regarding the adoption. (The parents may have rated themselves as "less satisfied" on the listed items from the survey; however, when asked how satisfied they were overall with the adoption, they rated the adoption as a positive rather than negative experience for themselves and their families.)

Studies of children from Romania adopted by parents in British Columbia, Canada, have produced similar results. For example, Morison et al. (1995) studied 43 Romanian children approximately 1 year after adoption. Among the Romanian children in their sample, 95% exhibited initial delays in fine motor, adaptive, personal-social, gross motor, and language skills. After 11 months, 46% of the children continued to demonstrate delays in these areas. Moreover, when

TABLE 1. Intercountry Adoption Sources From Peer-Reviewed Journals

Author(s)/date	Sample/country	Measures
Albers, Johnson, Hostetter, Iverson, & Miller (1997)	56 children Eastern Europe	Physical and developmental examination at international adoption clinic
Chisholm (1998)	46 children Romania 46 nonadopted Canada 30 early-adopted Romania	Behavioral observation of attachment; interview with parents; <i>Stanford-Binet Intelligence Scale</i> , 4th ed.
Glennen & Masters (2002)	130 infants and toddlers Eastern Europe	Parent checklist of English-language skills acquired; <i>Language Development Survey</i> completed by parents; parent recording of 10 longest child utterances (MLU, grammatical morphemes)
Groothues, Beckett, & O'Connor (2001)	165 children Romania 52 children UK adoptees	Parent semistructured interview; parent questionnaire on behaviors; (parental satisfaction with adoption; use of social & educational services); <i>McCarthy Scales of Children's Abilities</i> ; <i>Denver Developmental Screening Questionnaire</i> ; <i>Rutter Behavior Scales</i>
Groze & Ileana (1996)	462 children Romania	Parent surveys of height, weight, and development
Gunnar, Morison, Chisholm, & Schuder (2001)	18 children Romania 15 early-adopted Romania 27 nonadopted Canada	Three saliva samples for 3 days; health and daily activities questionnaire completed by parents
Johnson & Dole (1999)	252 children Eastern Europe	Health and developmental examination of 252 sequential referrals to international adoption clinic
Johnson et al. (1992)	65 children Romania	Health and developmental examination of referrals to international adoption clinic, October 1990–September 1991
Kreppner, O'Connor, Rutter & the English and Romanian Adoptees Study Team (2001)	165 children Romania 52 children UK adoptees	<i>Revised Rutter Parent & Teacher Scales</i> ; birth weight; data from physical examination at entry into UK; retrospective completion by parents of <i>Revised Denver Scales</i> ; <i>McCarthy Scales of Children's Ability</i> ; parental interview on attachment disturbances
Mainemer, Gilman, & Ames (1998)	Families of 41 matched pairs of children–Romanian Canadian nonadopted	Parent interviews; <i>Parenting Stress Index</i> ; <i>Child Behavior Checklist</i> ; <i>Revised Denver Prescreening Developmental Questionnaire</i> ; <i>Attachment Q-Sort</i> ; open-ended questions regarding medical problems
Marcovitch, Cesaroni, Roberts, & Swanson (1995)	105 Canadian families with children from Romania	Parent survey; perceptions of adoption experience, child's condition, developmental concerns and progress
McGuinness, McGuinness, & Dyer (2000)	105 children Eastern Europe	<i>Child Behavior Checklist</i> –Teacher Report Form; <i>Vineland Adaptive Behavior Scale</i> (parent interviewed by telephone); <i>Family Environment Scale</i> ; parent report of health at adoption, age at institutionalization, and length of stay in orphanage
Miller & Hendrie (2000)	452 children China	Health and developmental examination of 192 referrals to international adoption clinic; laboratory test results and medical evaluation survey completed by physician for 260 children
Morison, Ames, & Chisholm (1995)	43 children Romania	<i>Revised Denver Prescreening Developmental Questionnaire</i> ; parental report on development and institutional factors; <i>Revised Gesell Developmental Test</i>

(table continues)

(Table 1 continued)

Author(s)/date	Sample/country	Measures
Morison & Ellwood (2000)	35 children Romania 35 nonadopted Canada 24 early-adopted Romania	<i>Stanford-Binet Intelligence Scale</i> , 4th ed.; <i>Home Observation for Measurement of the Environment</i> ; parent interviews; <i>Revised Denver Prescreening Developmental Questionnaire</i>
O'Connor, Marvin, Rutter, Olrick, Britner, & the English and Romanian Adoptees Study Team (2003)	111 children Romania 52 children UK adoptees	Caregiver interview and questionnaires on behavior & relationships; observations during modified separation–reunion assessment; teacher reports of behavior; parent retrospective completion of <i>Denver Scales</i>
O'Connor & Rutter (2000)	165 children Romania 52 children UK adoptees	Semistructured interviews with parents on attachment behaviors
O'Connor, Rutter, Beckett, Keaveney, Kreppner, & the English and Romanian Adoptees Study Team (2000)	165 children Romania 52 children UK adoptees	Weight & head circumference at adoption; <i>McCarthy Scales of Children's Abilities</i> ; <i>Merrill-Palmer Scale</i> ; parental report on <i>Revised Denver Prescreening Developmental Questionnaire</i> ; total months in institution & age at entry into UK
Rojewski, Shapiro, & Shapiro (2000)	45 children China	Parent perceptions of behavior on Parent Rating Scale of the <i>Behavior Assessment System for Children</i>
Rutter & the English and Romanian Adoptees Study Team (1998)	111 children Romania 52 children UK adoptees	Height & head circumference; <i>Denver Scales</i> ; <i>McCarthy General Cognitive Index</i> ; age at entry to the UK
Rutter, Kreppner, & O'Connor (2001)	165 children Romania 52 children UK adoptees	Caregiver interview, <i>Rutter Behavior Scales–Parent & Teacher</i> ; <i>McCarthy Scales of Children's Abilities</i> ; <i>Autism Screening Questionnaire</i> ; <i>Autism Diagnostic Interview–Revised</i>

children adopted from Romanian institutions after the age of 8 months were compared to same-age and same-gender children adopted in Romania before age 4 months as well as to never-adopted or institutionalized Canadian children, those institutionalized for more than 8 months evidenced the greatest number of delays.

In a follow-up study of this sample of children approximately 3 years after their adoption, Morison and Ellwood (2000) found only two predictors of children's IQ scores. Both a longer time spent in the orphanage and a greater number of delays reported by parents at 11 months postadoption were related to lower IQ scores for the Romanian adoptees. Overall, the Canadian-born children performed at higher levels than did the Romanian children, with the early-adopted Romanian children consistently scoring between the Canadian-born and the late-adopted Romanian group. Morison and Ellwood therefore suggested that even the early-adopted Romanian children remained at risk.

Late-adopted Romanian children in this sample also demonstrated more indiscriminately friendly behaviors than their Canadian-born or early-adopted Romanian counterparts (Chisholm, 1998). Insecure attachment patterns among

the late-adopted Romanian children were related to their increased level of behavior problems and lower IQ scores. In addition, increased behavior problems were related to higher stress levels for parents of the late-adopted Romanian children (Mainemer, Gilman, & Ames, 1998).

Finally, Gunnar et al. (2001) studied a representative subset of children from the British Columbia, Canada, sample, including 18 late-adopted Romanian children and 15 early-adopted Romanian children, all of whom had been in their adoptive homes approximately 6.5 years. In addition, a subset of 27 Canadian-born children was selected. Parents collected saliva samples for cortisol assay for all children across 3 days at "wake up," noon, and evening. Although the cortisol levels for the early-adopted Romanian children did not differ from those for the Canadian-born children, the late-adopted Romanian children exhibited higher ambulatory cortisol levels throughout the day. Furthermore, length of institutionalization beyond 8 months was clearly related to higher levels of cortisol, but age and low IQ were not. The authors suggested that future research must examine concurrent child behavior and family stress to determine whether such elevated cortisol levels re-

flect early experiences or parent–child interactions resulting from behavioral problems.

Such data further underscore the importance of the results of one additional survey of 105 Canadian families that adopted children from Romania (Marcovitch, Cesaroni, Roberts, & Swanson, 1995). Although the parents tended to have positive perceptions of their overall adoption experience, they believed they lacked information from social and health services regarding parental stress and the developmental concerns that might surface for their children upon arrival at their adoptive home.

Children From Eastern Europe. Children adopted from orphanages in Russia and other eastern European countries also evidence delays upon adoption. For example, at an international adoption clinic from June 1991 until March 1995, Albers, Johnson, Hostetter, Iverson, and Miller (1997) examined 56 children adopted from Russia, Moldova, Ukraine, Albania, Kazakhstan, Latvia, Poland, and Bulgaria. These children exhibited 1 month of delayed growth for every 5 months they had spent institutionalized. They also demonstrated delayed fine motor (82%), gross motor (70%), language (59%), and social–emotional (53%) skills.

Similarly, Johnson and Dole (1999) reported data for 252 children adopted from eastern European countries and examined at an international adoption clinic. At the time of examination, these children averaged 28.5 months of age and 20.4 months of care in an institutional setting abroad. Of those children who had spent 12 months or more in the orphanage, 90% evidenced delays in one or more developmental areas. Additionally, these children were delayed by 1 month of linear growth for each 3.4 months of orphanage confinement.

McGuinness, McGuinness, and Dyer (2000) surveyed parents of 105 children 6 to 9 years of age who had spent an average of 34.39 months in orphanages in eastern Europe. They found alcohol abuse by the birth mother reported in the health information of 43 of these children. Although 85% of the children in their sample were in general education, two children attended a “developmental” kindergarten, one a class for children with emotional and behavioral disorders, and five a full-time special education classroom.

Finally, Glennen and Masters (2002) collected parent survey data on infants and toddlers adopted from eastern Europe, with follow-up surveys conducted at 3 months and again at 6-month intervals until the children reached 36 to 40 months of age. At the time of adoption, approximately 80% of the 130 participating children evidenced risk factors associated with difficulty in language development, including premature birth (30.77%), height and weight below the 10th percentile (59.23%), gross motor delays (38.46%), developmental delays (44.62%), and a history of chronic otitis media (26.92%). In follow-up surveys, however, 60.38% of the parents reported no continuing medical or developmental difficulties for their children. Height and weight below the 10th percentile (15.09%), mild developmental delays (11.32%),

chronic otitis media (6.60%), behavior problems (4.72%), attachment issues (4.72%), and visual impairments (2.83%) were among the difficulties still noted by parents at follow-up. Moreover, one child had been diagnosed with a pervasive developmental disorder. Although the majority of the children rapidly acquired English, language delays continued through age 36 months, with an increase in the magnitude of delay related to an increase in the child’s age at the time of adoption.

Children From China. Although parents maintain that the availability of healthy infants is an important factor in their decision to adopt from China (Tessler, Gamache, & Liu, 1999), health difficulties and developmental delays are nevertheless apparent among these youngsters. In two groups of children ($N = 452$), primarily girls, adopted from China between 1991 and 1998 and examined at an international adoption clinic, Miller and Hendrie (2000) reported delays for 75%. These delays included difficulty with gross motor (55%), fine motor (49%), language (43%), cognitive (32%), and social–emotional (28%) skills. Moreover, these children evidenced medical problems including anemia (35%), elevated blood lead levels (14%), and hearing loss (18%) not reported in initial medical information received by the parents. Miller and Hendrie noted growth delays of about 1 month of height for every 2.86 months in an orphanage and concluded that children adopted from China demonstrate patterns of developmental and growth delays, as well as medical difficulties, similar to children adopted from Romania, Russia, and other eastern European countries.

Rojewski et al. (2000) used the *Behavior Assessment Scale for Children* to survey parents of 45 children adopted from China. Parent ratings of hyperactivity, aggression, and conduct and attention problems indicated that these youngsters exhibited at-risk behavior. In addition, parents more frequently rated younger children as “withdrawn” while rating their older children as “aggressive” or “hyperactive.”

Review of Additional Sources

Eight more resources provided additional background and context regarding the growth and development of postinstitutionalized children of intercountry adoption. These included two parent surveys, one conducted through an adoption agency and the other through a parent organization; one review of literature from a peer-reviewed professional journal; and five papers from professional conferences that presented additional information on the children adopted in Canada from Romania.

Clauss and Baxter (1997), for example, surveyed 206 families whose children averaged 37 months of age at the time of adoption, with an average length of stay in the orphanage of 30 months prior to adoption. Thirty-nine percent of these parents reported ongoing delays for their children after an average of 23 months postadoption, compared to 73% who ob-

served delays at the time of adoption. Of those parents reporting continuing delays, 32% indicated delays in speech and language, 13% in fine motor skills, and 13% in social skills.

Price (2000) also surveyed parents of 573 families that adopted 798 children, primarily (90%) from Russia. These children, ranging in age from 1 month to 14 years at the time of adoption and living with their adoptive parents from 0 months to 8 years 9 months, had spent an average of 17.62 months in an orphanage. In Price's survey, 63.5% of the parents reported some type of physical or medical difficulty; 20% reported emotional problems, including attachment disorder and attention-deficit/hyperactivity disorder (ADHD); and 25% reported developmental and language delays for their adopted children. Furthermore, Price found that the children were in their adoptive homes an average of 2.62 years before developmental issues became apparent to their parents and 2.64 years before physical difficulties became evident. Moreover, emotional problems did not surface until an average of 3.67 years following adoption, when these children had entered Grades 1 through 5 in school.

In a review of the literature, Judge (1999) noted medical difficulties (e.g., fetal alcohol syndrome), growth and developmental delays (e.g., malnourishment, small stature), sensory defensiveness, speech and language deficits, and social-emotional problems (e.g., inappropriate attachment behaviors, including indiscriminate friendliness), which created stress for parents who had adopted children from eastern Europe. Judge suggested that by providing appropriate and proactive support to families, early intervention services might help to ameliorate the effects of early deprivation for these children.

Five additional analyses of data collected from the children adopted from Romania by Canadian parents offer interesting longitudinal perspectives. In Phase 3 of the study, the late-adopted Romanian children averaged 11 years of age, and the early-adopted Romanian children, 10.5 years of age. After living in their adoptive homes for approximately 10 years, the late-adopted children exhibited more attentional problems than their early-adopted or Canadian-born counterparts (i.e., 29% had a clinical diagnosis of ADHD; LeMare & Audet, 2002). Attention problems 10 years later were predicted by attention difficulties and indiscriminately friendly behaviors at age 4.5. Moreover, attention problems at age 4.5 were associated with lower IQ, lower academic achievement in math and reading comprehension, and perceptions of less social support from the peer group or a close friend at age 10.5. It is interesting that a nurturing and stimulating adoptive home environment at age 4.5 was related to fewer attention difficulties at the later age.

In addition, the late-adopted Romanian children demonstrated more insecure attachment behaviors than did either the early-adopted or Canadian-born children (FERNYHOUGH, Audet, & LeMare, 2002). The late-adopted children also reported feelings of lower self-worth and less support from a close friend than their Canadian-born peers despite teacher, parent, and peer ratings of social acceptance (LeMare, War-

ford, & Fernyhough, 2001) and demonstrated lower IQ scores, poorer academic performance, and lower ratings by teachers regarding schoolwork habits than either the early-adopted or Canadian-born children (LeMare, Vaughan, Warford, & Fernyhough, 2001). Moreover, according to LeMare, Vaughan, et al. (2001), 60% of the older Romanian children and 12% of the younger Romanian children had repeated at least one grade in school, with length of time spent in the institution the only variable correlated with lower IQ scores 10 years postadoption.

Finally, adoptive parents of the Romanian children, although satisfied with their adoption, continued to report higher levels of parenting stress than did parents of the Canadian-born children (LeMare & Kurytnik, 2002). The sources of such stress, as in Phase 2 of the study, were from child variables such as attention problems and overactivity. In addition, parents of the early-adopted children now reported higher levels of stress, similar to levels of the parents of the older Romanian children. LeMare and Kurytnik speculated that the sources of this stress might be related to the academic and cognitive difficulties now faced by the Romanian children at school.

Limitations of the Research

The research on postinstitutionalized children of intercountry adoption is only just beginning; therefore, a number of limitations must be acknowledged regarding the research obtained from the peer-reviewed professional journals. First, most of what we currently know about these children comes from two relatively small samples of Romanian children: 35 adopted in British Columbia, Canada, and 165 adopted in the United Kingdom. Studies from both of these research groups provide rich longitudinal data, but we still know very little about children adopted from Russian, other eastern European, and Chinese orphanages. Given that Russia and China now account for more than half of all adopted children entering the United States (U.S. Department of State, 2003), research on outcomes for these children is critical. We might speculate that similar results would be obtained for postinstitutionalized children adopted by parents in the United States, but we cannot state this with certainty. We also know relatively little about the postadoption outcomes for children adopted beyond the age of 4 to 5 years, although Rutter et al. (2001) suggested that linear trends indicate diminished chances of normal functioning with increasing age at the time of adoption. Finally, the Romanian children in the series of studies from the United Kingdom and the children in the Canadian data set tended to have older, well-educated, and affluent adoptive parents (Mainemer et al. 1998; Rutter, Kreppner, & O'Connor, 2001). Such parents might have been more likely than others to participate in research studies, to provide an enriched home environment, and to seek out support services for their children.

Age at the time of adoption was an additional important confounding variable. In almost all cases, age at adoption

equaled length of time spent in the orphanage. However, a longer time spent in the orphanage also meant less time spent in a stimulating home environment, making comparisons between early- and late-adopted children more difficult, as parental expectations for child performance may have influenced not only their choice to adopt an older or younger child but also their interactions with their child following adoption (Morison & Ellwood, 2000).

Research from non-peer-reviewed sources must, of course, be interpreted with even greater caution. For example, not all of the children were evaluated directly by researchers in two non-peer-reviewed studies (Clauss & Baxter, 1997; Price, 2000). Parent surveys and parent reports of institutional conditions, the health of the child upon arrival, or the types of difficulties presently experienced by the child were used in a number of studies. Moreover, research conducted through parent support groups (Price, 2000) or through adoption agencies (Clauss & Baxter, 1997) relied heavily on parents volunteering to complete surveys. This may have resulted in possible selection bias and overreporting of child difficulties, as parents who were experiencing a greater number of problems with their children may have been more likely than others to agree to participate in the research.

Analysis of Findings

Nevertheless, an analysis of the available research indicates that postinstitutionalized children adopted from Romania, Russia, other eastern European countries, and China typically exhibit health-related problems and/or marked delays in growth and development at the time of their adoption. Although these children do make remarkable progress once home with their adoptive parents, some experience continued delays in motor, social, cognitive, and language skills. For others, medical or developmental difficulties may finally be acknowledged by the adoptive parents months or years after adoption and may involve lower cognitive ability or unusual behaviors (e.g., attachment problems exhibited as indiscriminate friendliness, inattention and overactivity, quasi-autistic features) related to profound institutional deprivation (Rutter et al., 2001), which may result in a need for special services through the schools. Furthermore, according to Rutter (1995), the exact relationship among risk factors, child responses to stress and adversity, and subsequent experiences postadoption is unknown, with considerable variability in outcomes apparent among these children.

Although length of time spent in the orphanage consistently appears to be related to delays in growth and development regardless of the country of origin, with those children having the longest stays in an institutional environment usually experiencing greater delays when compared to peers, even a very young age at the time of adoption is not a guarantee that individual children will experience no difficulties later (Grozé & Ileana, 1996; Rutter et al., 2001). When

postinstitutionalized children of intercountry adoption enter school, for example, they may experience increased stress from greater cognitive, academic, and behavioral demands as they advance up the grades (Kreppner, O'Connor, & Rutter, 2001). Simultaneously, their parents and teachers may compare them to chronological-age peers who have a deeper command of the English language, as well as more enriched cognitive and social experiences from birth onward, further increasing stress for the child and the family (LeMare & Kurytnik, 2002).

Institutionalization, First-Language Shift, and School Performance

One important unanswered question involves school performance and the shift in first language experienced by postinstitutionalized children of intercountry adoption. We do not yet know whether the difficulty in academic, cognitive, and behavioral functioning exhibited by some of these children as they enter school is related solely to lengthy and early institutional deprivation, to the shift in language they must make upon adoption, or to a combination of these and other factors.

We do know that language delays are among the most common difficulties noted in the preadoption files of children from Russian, other eastern European, and Chinese orphanages (Johnson & Hostetter, 2000; Miller & Hendrie, 2000). Whether these language delays are related to conditions that resulted in a child's initial institutionalization or to factors associated with the institutional environment is, of course, unknown. According to Gindis (2003), however, by the age of 4, approximately 80% of children in Russian orphanages are still speaking only in one- to two-word sentences and many also have a limited vocabulary. Although in some children such language delays may be related to physiological difficulties (e.g., untreated otitis media), for many others these delays are most likely related to the limited amount of language interaction and stimulation offered by caregivers.

Glennen (2003), for example, reported her observations of toddlers, ages 14 to 22 months, during an 8-day period in one Russian orphanage. Language interactions observed were primarily caregiver to caregiver. Language directed by caregivers toward the children most often consisted of simple commands related to daily physical or functional needs, with comments, statements, and questions infrequently used. Moreover, she noted a low frequency of communicative vocalizations made by the children, with most activities such as eating conducted in silence. Furthermore, because the children were housed in same-age groups, they lacked opportunities to hear older children as language models. Unfortunately, others describe similarly limited language interactions in Romanian (Bascom & McKelvey, 1997; Federici, 1998) and Russian (Gindis, 2003; Meese, 2002) orphanages.

When children of intercountry adoption arrive in the United States, then, they lose their first language quite rapidly. Gindis (2003) and Glennen and Masters (2002) re-

ported that most children adopted from eastern European orphanages lose their first language within 3 to 6 months after arrival home with their adoptive parents. This loss of language occurs far faster than gains in the new language, although some research suggests that these children acquire English on the same developmental trajectory as their non-adopted peers (Glennen & Masters, 2002). Those children who are older at the time of adoption (i.e., more than 12 months of age), though, do tend to lag behind peers on measures of both receptive and expressive language skills, with the degree of delay related to the age at adoption. Furthermore, prosodic, syntactic, and phonological differences between the first language and English (e.g., Russian phonemes such as /sv/ are not easily transferable to English; English morphemes such as adding the plural /s/ are not used by Russian speakers) may affect how readily children learn their new language (Glennen, 2002).

On the other hand, somewhat different results have been obtained for children adopted from China. Roberts, Krakow, and Pollock (2003), for example, found that only 15% of preschoolers adopted from China who had been in the United States for at least 2 years scored below average on two or more speech–language assessments. In addition, Krakow and Roberts (2003) noted that among children adopted from China at an age between 7 and 11 months, the majority had no evidence of delays in their expressive English vocabulary by age 2 to 2½ years. These results must be interpreted with caution, however, as children adopted from China are primarily female and are typically under the age of 2 at the time of their adoption.

Hough (2000) suggested that 40% to 50% of all children arriving in the United States from eastern European orphanages learn English easily, yet their parents express concern at the difficulty these children have later on in school. Although postinstitutionalized children who are age 3 or younger when adopted have some time to learn English prior to school entry, those who are between the ages of 4 and 8 at their adoption have little time before beginning school and may not yet have attained age-appropriate fluency in their first language (Gindis, 2003). Moreover, children from orphanages may have learned an “institutional language.” Thus, first-language skills may not transfer to assist these children in learning more complex English-language skills, and their English-language acquisition may also be complicated by cognitive and language delays related to their institutionalization.

Of particular concern is the interruption to the child’s language development at a critical period of language acquisition. When the child no longer hears the first language, he or she loses that language and begins to learn English. Therefore, as Gindis (2000) noted, children of intercountry adoption are typically not bilingual speakers who will continue to hear the first language in the home. They are monolingual speakers of their first language who, after a period of disrupted or arrested language development, become monolingual English speakers.

In addition, children of intercountry adoption frequently fool their parents and teachers by their speed of learning, and apparent facility with, their new language (Dalen, 2001). Although conversational English is contextually rich, proficiency in it may not be sufficient to enable children to understand the academic language of discourse delivered in English in the classroom (Cummins, 1982, 1996). As postinstitutionalized children advance through the grades and academic language becomes more and more complex, they may lose out on subject matter essential for comprehending topics at a deeper level in subsequent grades and fall further and further behind their peers. Also, the seeming ease with which most children of intercountry adoption learn English may lull parents and teachers into believing that those children understand their classwork better than they do, and, unfortunately, any academic difficulties that arise may easily be attributed to the process of learning English, while real language or cognitive difficulties are overlooked.

Of course, some children of intercountry adoption will learn English quickly (Glennen & Masters, 2002; Krakow & Roberts, 2003; Roberts et al., 2003) and catch up academically. But others may fall behind peers as the gap widens between their conversational proficiency in English and the skills demanded by the academic language of the classroom. Although we do not yet know the long-term effects of a first-language shift on the academic performance of postinstitutionalized children of intercountry adoption, we might make a few cautious generalizations (Meese, 2002):

- An orphanage environment may preclude the normal development of a child’s first language.
- Fluency with the first language can facilitate learning a second language; however, children of intercountry adoption are often not fluent in the first language when they are adopted.
- Children of intercountry adoption experience disrupted language development, rapidly losing the first language as they learn the new language.
- The child’s speed of learning English and proficiency with conversational English do not guarantee later success in using the language to learn academic content in classrooms.
- Professionals and parents may easily overlook language or other cognitive disabilities in children of intercountry adoption, attributing any learning and behavioral difficulties that arise to the process of acquiring a new first language or to adjustment to a new country and family. (pp. 111–112)

Summary and Recommendations for Future Research

Regardless of the country of origin, postinstitutionalized children of intercountry adoption typically exhibit health prob-

lems; delayed growth; and delayed social, cognitive, motor, and language skills at the time of their adoption. Such delays are consistently associated with duration of deprivation (i.e., length of stay in an orphanage), with those children having longer stays in an orphanage evidencing greater delays than those with shorter periods of institutionalization. Thus, those children who are below the age of 2 at the time of adoption may grow, develop, and match their chronological-age peers in motor, social, language, and cognitive skills approximately 2 to 4 years after adoption. Those children entering the United States after the age of 2, however, often continue to lag behind their same-age peers. These children are apparently at greater risk and may require some special services to maximize their school performance. Although considerable heterogeneity in postadoption outcomes exists among children from orphanages as a group, duration of deprivation remains an important predictor of outcomes, exerting a greater influence on a child's growth and development than time spent in the adoptive home beyond 2 years.

Postinstitutionalized children of intercountry adoption, then, would appear to constitute a high-risk group. Of critical importance are determining and providing the appropriate assistance as early as possible for those children who do require it before frustration and failure occur later in elementary school. Although the Romanian children in the United Kingdom and Canadian data sets continue to be followed longitudinally, future research might also examine the degree to which children adopted in the United States from Russia, eastern Europe, and China evidence the same developmental trajectories as those from Romania. In addition, we do not yet know the frequency with which postinstitutionalized children of intercountry adoption are identified by their schools as having academic or behavioral difficulties. We do not know, for example, whether schools in the United States are experiencing an increase in the number of children of intercountry adoption who are referred to child study teams or placed in special education programs. Finally, we do not yet know whether the academic and behavioral problems displayed by some of these children as they enter school are related to institutional deprivation, to the shift in first language made upon adoption, or to a combination of these and other factors. Future research may inform policy and practice designed to address the complex needs of this recent postinstitutionalized population.

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